

## **APPENDIX A**

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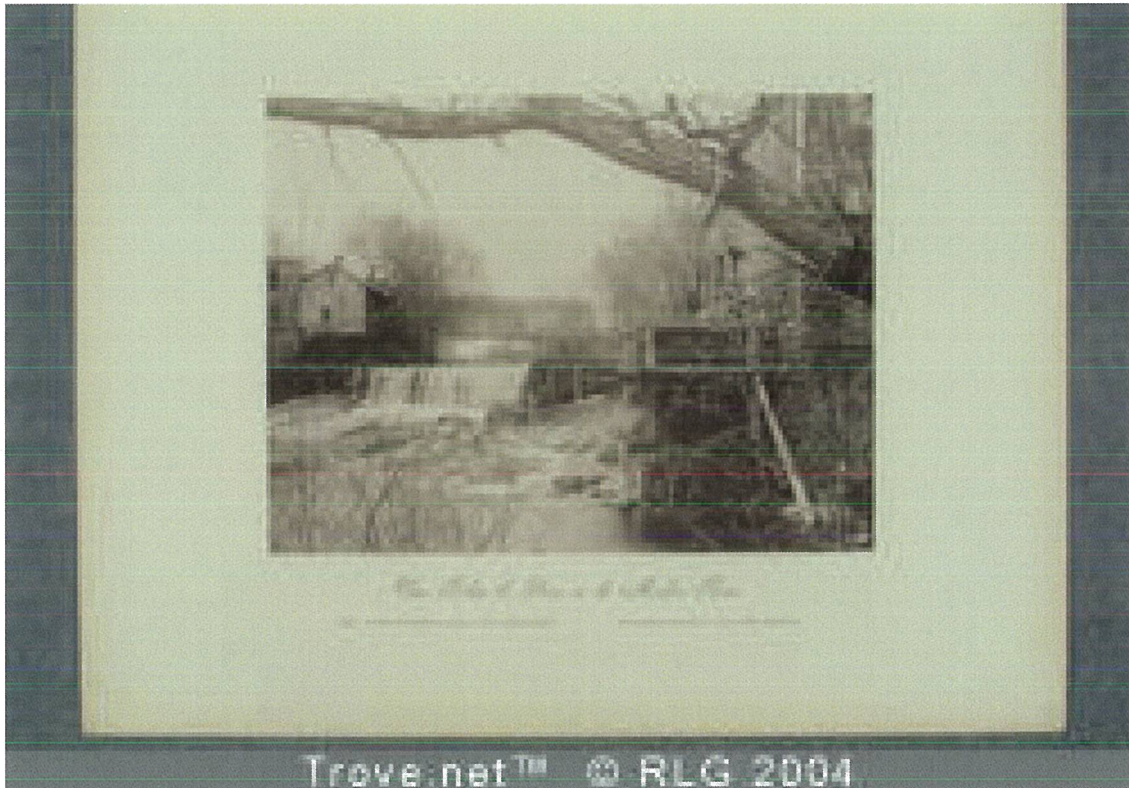
### **Project Area Photographs**



View looking upstream at the  
Manhan River Dam



View of Manhan River Dam headpond



1880 Photograph of the Manhan River Dam





1998 photograph of Manhan Dam showing site conditions on right bank below dam before repair work was initiated



2000 photograph of right bank after repair work, showing new flood/training wall



Right bank of Manhan River below dam,  
proposed location of Denil fish ladder



View looking south towards right bank, showing Waterworks Building

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## APPENDIX B

### U.S. Army Corps of Engineers Coordination



Levitt/78114/ja

May 19, 2000

Engineering/Planning Division  
Evaluation Branch

Mr. Jack Terrill, Asst. Regional Administrator  
National Marine Fisheries Service  
One Blackburn Drive  
Gloucester, Massachusetts 01930

Dear Mr. Terrill:

The U.S. Army Corps of Engineers, New England District (Corps), would like to invite a member of your staff to a Coordinated Site Visit for The Manhan Dam Aquatic Ecosystem Restoration Project, in East Hampton Massachusetts on Monday, June 19, 2000, at 10:00 am. Rain date Tuesday, June 20, 2000. We will meet at the Manhan Dam parking lot, first to view the project area, and then return to the City Hall for discussion.

The City of East Hampton, in a letter dated November 5, 1999, requested that the Corps initiate a Water Resources Development Act of 1996, Section 206 Aquatic Ecosystem Restoration project for the Manhan River Dam. The project would investigate and identify appropriate alternative(s) to restore anadromous fish passage over the dam. The purpose of this letter is to obtain your comments on this project, pursuant to the Fish and Wildlife Coordination Act, as amended, and to request a list of endangered and threatened species for the project area pursuant to Section 7(c) of the Endangered Species Act of 1973, as amended. A map is enclosed to assist you with your work.

The Manhan River upstream from the dam historically provided spawning and nursery habitat for anadromous Atlantic salmon, and is potential habitat for the anadromous alewife, blueback herring, and shad. Atlantic salmon fry are presently stocked in the Manhan River upstream from the dam in order to restore historical runs to the river. However, without upstream passage, returning adults are unable to migrate beyond the Manhan Dam. Based on previous site visits, it appears that the construction of a fish ladder may be the most appropriate means of accomplishing upstream passage.

We look forward to your contribution towards the development of an appropriate alternative(s) for this aquatic restoration project. Any questions or comments can be directed to Mr. Ken Levitt, Environmental Resources Section, at (978) 318-8114 or Ms. Barbara Blumeris, study manager, at (978) 318-8737.

Sincerely,

John R. Kennelly  
Deputy Chief, Engineering/Planning Division

Enclosure

May 19, 2000

Engineering/Planning Division  
Evaluation Branch

Ms. Patricia Huckery  
Massachusetts Natural Heritage and  
Endangered Species Program  
Division of Fish and Wildlife  
One Rabbit Hill Road  
Westborough, Massachusetts 01581

Dear Ms. Huckery:

The U.S. Army Corps of Engineers, New England District (Corps), would like to invite a member of your staff to a Coordinated Site Visit for The Manhan Dam Aquatic Ecosystem Restoration Project, in East Hampton Massachusetts on Monday, June 19, 2000, at 10:00 am. Rain date Tuesday, June 20, 2000. We will meet at the Manhan Dam parking lot, first to view the project area, and then return to the City Hall for discussion.

The City of East Hampton, in a letter dated November 5, 1999, requested that the Corps initiate a Water Resources Development Act of 1996, Section 206 Aquatic Ecosystem Restoration project for the Manhan River Dam. The project would investigate and identify appropriate alternative(s) to restore anadromous fish passage over the dam. The purpose of this letter is to initiate study coordination on the proposed project and to request a listing of any threatened or endangered species and rare or exemplary habitat that you may believe may be in the project area. A map is enclosed to assist you with your work.

The Manhan River upstream from the dam historically provided spawning and nursery habitat for anadromous Atlantic salmon, and is potential habitat for the anadromous alewife, blueback herring, and shad. Atlantic salmon fry are presently stocked in the Manhan River upstream from the dam in order to restore historical runs to the river. However, without upstream passage, returning adults are unable to migrate beyond the Manhan Dam. Based on previous site visits, it appears that the construction of a fish ladder may be the most appropriate means of accomplishing upstream passage.

We look forward to your contribution towards the development of an appropriate alternative(s) for this aquatic restoration project. Any questions or comments can be directed to Mr. Ken Levitt, Environmental Resources Section, at (978) 318-8114 or Ms. Barbara Blumeris, study manager, at (978) 318-8737.

Sincerely,

John R. Kennelly  
Deputy Chief, Engineering/Planning Division

**SAME LETTER SENT TO:**

Ms. Lois Bruinooge  
Division of Watershed Management  
Massachusetts Dept. of Environ. Prot.  
One Winter Street  
Boston, Massachusetts 02108

Mr. Mark Tisa, Ph.D.  
Commonwealth of Massachusetts  
Division of Fisheries and Wildlife  
One Rabbit Hill Road  
Westborough, Massachusetts 01581

Mr. Robert Deblinger, Ph.D.  
Assistant Director, Wildlife  
Division of Fish and Wildlife  
One Rabbit Hill Road  
Westborough, Massachusetts 01581

Mr. John O'Leary  
Team Leader Connecticut River Basin  
NRCS, Room 39  
243 King Street  
Northampton, Massachusetts 01060

Mr. Thomas Skinner  
Massachusetts Coastal Zone Management  
100 Cambridge Street  
Boston, Massachusetts 02202

Mr. Robert A. Durand, Secretary  
Executive Office of Environmental  
Affairs  
MEPA office  
100 Cambridge Street  
Boston, Massachusetts 02202

Mr. Paul Diodati, Director  
Massachusetts Division of Marine  
Fisheries  
100 Cambridge Street  
Boston, Massachusetts 02202

Caleb Slater  
Anadromous Fish Team Leader  
Massachusetts Division of Fisheries &  
Wildlife  
Field Headquarters  
Westboro, Massachusetts 01581

Mr. David Webster  
Director, Massachusetts Office of  
Ecosystem Protection  
EPA - New England, Region 1  
One Congress Street, Suite 1100 (CMA)  
Boston, Massachusetts 02114-2023

Mr. Curt Orvis  
US Fish and Wildlife Service  
300 Westgate Center Drive  
Hadley, MA 01035-9589

Ms. Jan Rowan  
Connecticut River Coordinator  
US Fish and Wildlife Service  
103 East Plumtree Road  
Sunderland, MA 01375-9175

Mr. Tom Maloney  
Connecticut River Watershed Council  
One Ferry Street  
East Hampton, MA 01027

Mr. Richard Thibedeau, Director  
Bureau of Resource Protection  
Massachusetts Dept. of Environmental  
Mgmt  
100 Cambridge Street, Room 1404

Copy Furnished:

Mr. Michael Tautznik, Mayor  
43 Main Street  
Easthampton, Massachusetts 01027



Manhatten Dam Coordinated Site Visit  
June 19, 2000

Name	Agency	Phone	E-mail
Ken Levitt	USACE	978-318-8114	Kenlevitt@usace.mil
John A. O'Leary	EOEA C.R. with	913-587-9319	JohnO@usace.mil
David Shepardson	EOEA/MEPA	617-626-1627	David.S@usace.mil
Tom Maloney	CRWC	413-529-9500	crwc@usace.mil
Michael A. Turtzic	Major Environmental	413-529-1470	mike@usace.mil
ALBERT J. MILLER	COMM.	413-527-2279	
FRANK STODOLAS	COMM. THE	527-5961	
Edward Gromada		527-1738	
Henry Walz	neighbor	527-3089	
Barbara Blum		978-318-0737	

U.S. Army Corps of Engineers sign-in sheet from June 19, 2000 site visit



## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

New England Field Office  
22 Bridge Street, Unit #1  
Concord, New Hampshire 03301-4986



June 20, 2000

Mr. John R. Kennelly  
Deputy Chief, Engineering/Planning Division  
U.S. Army Corps of Engineers  
696 Virginia Road  
Concord, MA 01742-2751

Dear Mr. Kennelly:

This is in response to your letter dated May 22, 2000, requesting our comments on the Manhan Dam Aquatic Ecosystem Restoration Project in Easthampton, Massachusetts. The project would investigate and identify appropriate alternatives to restore anadromous fish passage over the dam. The following comments are provided in accordance with the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) and with Section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1543).

Atlantic salmon fry are currently being stocked in the Manhan River upstream from the dam in an effort to restore historical runs to the river. According to your letter, potential habitat for anadromous alewife, blueback herring, and shad also exists upstream of the dam. However, without upstream passage, these fish are unable to migrate beyond the dam. We concur with the assessment that the construction of a fish ladder would most likely be the most appropriate means of establishing upstream passage for anadromous fish.

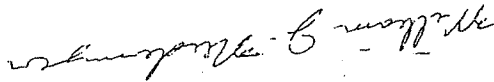
Based on information currently available to us, no federally-listed or proposed, threatened or endangered species under the jurisdiction of the U.S. Fish and Wildlife Service are known to occur in the project area, with the exception of occasional transient bald eagles (*Haliaeetus leucocephalus*). However, we suggest that you contact Hanni Dinkeloo of the Massachusetts Natural Heritage and Endangered Species Program, Route 135, Westborough, MA 01581, telephone (508) 792-7270, for information on state-listed species that may be present.

Preparation of a Biological Assessment or further consultation with us under Section 7 of the Endangered Species Act is not required. Should project plans change, or additional information on listed or proposed species becomes available, this determination may be reconsidered.

If you have any questions concerning these comments, please contact Philip Morrison at 603-225-1411.

-2-

Sincerely yours,



William J. Neidermyer  
Acting Supervisor  
New England Field Office

*Lenitt*

December 21, 2001

Engineering/Planning Division  
Evaluation Branch

Ms. Cara Metz, SHPO/Executive Director  
Massachusetts Historical Commission  
The Massachusetts State Archives Building  
220 Morrissey Boulevard  
Boston, Massachusetts 02125

Dear Ms. Metz:

The U.S. Army Corps of Engineers, New England District, is preparing an Environmental Assessment for a proposed Section 206 Ecosystem Restoration project at the Manhan Dam on the Manhan River in Easthampton, Massachusetts. Please refer to the enclosed figures and maps. We would like your formal comments on the following undertaking.

A complete and detailed project description is enclosed as Enclosure 1. Briefly, the proposed alternative consists of constructing a fish ladder at the Manhan Dam to provide access to anadromous fish spawning habitat above the dam along the upper reaches of the Manhan River. This would entail construction of a Denil fish ladder on the right abutment of the Manhan Dam. Initial excavation of the bedrock bottom and bank material may be required to construct the fish ladder supports and footings. Vegetation will be cleared only as required to provide a staging area, an area for stockpiling equipment and materials, access to construction sites, and for temporary access around the dam. Minor regrading may be needed to accommodate the temporary access road along the eastern side of the dam. Once completed, a concrete pedestrian ramp will be constructed in the vicinity of the fishway exit to allow visitors viewing opportunities of fish migrations.

A review of archaeological site files at the Massachusetts Historical Commission revealed several documented historic and archaeological properties both within and in the vicinity of the proposed project area. A prehistoric site (19-HS-42) dating from the Woodland and Contact Period and consisting of a palisaded fort built by Native Americans during the first English settlement, was located on a high bluff above the east bank of the Manhan River. The area has been completely built over by modern development.

The Manhan Waterworks Dam (known as Historic Archaeological Site Number 2) comprises the existing dam and adjacent structures. (The following discussion is taken from the Manhan Waterworks Dam Form D (Historic Resources Survey) inventory form dated December 1984.) In 1686, Samuel Bartlett was given the privilege of setting up a corn mill on the Manhan River at the falls. In 1725, the mill was given to his son, Joseph Bartlett, who was the first settler in the area now known as Easthampton center. The village of



-3-

and temporary access around the dam. A temporary 12-foot wide gravel ramp will be incorporated within this area to facilitate construction. This road will be removed following construction of the fishway and the pedestrian ramp.

Therefore, the construction of the fish ladder at the Manhan Dam will have no effect upon any structure or site of historic, architectural, or archaeological significance as defined by the National Historic Preservation Act of 1966, as amended, and implementing regulations 36 CFR 800. We would appreciate your concurrence with this determination.

If you have any questions, please contact Mr. Marc Paiva of the Evaluation Branch at (978) 318-8796.

Sincerely,

David L. Dulong, P.E.  
Chief, Engineering/Planning Division

Enclosures

CF:  
Mr. Paiva  
Mr. Ring  
Mr. Levitt  
Mr. R. Russo (Plng)  
Reading File  
Eng/Plng Division File



**The Commonwealth of Massachusetts**

William Francis Galvin, Secretary of the Commonwealth  
Massachusetts Historical Commission

January 24, 2002

David E. Dulong, P.E.  
Chief, Engineering/Planning Division  
US Army Corps of Engineers  
696 Virginia Road  
Concord, MA 01742

RE: Manhan River Dam Fish Ladder Installation, Easthampton; MHC# 30077

Dear Mr. Dulong:

Staff of the Massachusetts Historical Commission have reviewed the information you submitted concerning the proposed project referenced above. The Manhan Dam is included in MHC's Inventory of Historic and Archaeological Assets of the Commonwealth. MHC staff have determined that the dam and buildings associated with the development of the Waterworks are eligible for listing in the National Register of Historic Places as a complex which conveys the history of industrial development in Easthampton (36 CFR 60). After a review of the information submitted, MHC staff have the following comments.

The proposed project involves the installation of a fish ladder and temporary gravel access way. Additionally, a viewing platform will be constructed at the site.

After a review of materials submitted, I have determined that the proposed project will have "no adverse effect" (36 CFR 800.5(b)) on the Manhan Dam and Waterworks complex.

These comments are offered to assist in compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (36 CFR 800). Please do not hesitate to contact Ann Lattinville of my staff if you have any questions.

Sincerely,

Bróna Simon  
Deputy State Historic Preservation Officer  
Massachusetts Historical Commission

xc: Easthampton Historical Commission

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JAN 29 2002

220 Morrissey Boulevard, Boston, Massachusetts 02125

(617) 727-8470 • Fax: (617) 727-5128

[www.state.ma.us/sec/mhc](http://www.state.ma.us/sec/mhc)

REGULATORY DIVISION

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## APPENDIX C

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**U.S. Army Corps of Engineers Public Notice (2002)**



# Public Notice

U.S. Army Corps  
Of Engineers  
New England District  
696 Virginia Road  
Concord, MA 01742-2751

Date: April 24, 2002  
Comment Period Closes: May 24, 2002  
Evaluation Branch, Engineering/Planning Division

## PUBLIC NOTICE

### MANHAN RIVER DAM AQUATIC RESTORATION PROJECT

#### EASTHAMPTON, MASSACHUSETTS

Interested parties are hereby notified that the City of Easthampton, MA, and the U.S. Army Corps of Engineers, New England District (Corps), plan to construct a fishway at the Manhan River Dam (Waterworks Dam). This would allow passage of anadromous fish beyond this first migration barrier to historical upstream spawning areas in both branches of the River and associated tributaries in the watershed. The project will be completed under the provisions of Section 206 of the Water Resources Development Act of 1996. Attachment 1 lists pertinent laws, regulations, and directives.

**Background:** The Manhan River Dam is located in Easthampton Massachusetts on the Manhan River, approximately 3 miles upstream from its confluence with the Connecticut River in Northhampton, see the attached Vicinity Map. It is the most downstream dam on the Manhan River, which flows a distance of 26 miles through the western side of the Connecticut Valley (in Massachusetts) draining parts of Huntington, Montgomery, Westfield, Holyoke, Westhampton Southhampton, Northhampton, and Easthampton. The mainstem of the river is joined by one large tributary, the North Branch, as well as numerous smaller tributaries, within its 48,000 acre watershed (total drainage area of 69 square miles).

As a tributary to the Connecticut River, it is presumed that the Manhan River once provided anadromous fish spawning and migration habitat to those species historically found in the Connecticut River Basin, to include Atlantic Salmon, blueback herring, and American shad. With the construction of the first dam in this location, as well as the subsequent reconstruction which occurred in the early 1900's which built the existing dam, the migratory anadromous runs in the Manhan River have been eliminated or significantly reduced. Currently, the Manhan River upstream from the Dam is being



stocked with Atlantic Salmon in an effort to restore them to the river. These fish will migrate downstream to mature in the ocean and return to spawn. However, without fish passage beyond the dam, the up-migrating adults will be unable to return to their spawning areas.

**Project Description:** The project's purpose is to construct a fish ladder at the dam to provide access to anadromous fish spawning habitat above the dam along the upper reaches of the Manhan River. The Manhan River below the Manhan Dam is currently accessible to up-migrating anadromous fish, so with a fish ladder in place these fish will have access to suitable spawning and nursery habitat upstream of the dam. Fish species expected to use the fish ladder are the anadromous Atlantic salmon, blueback herring, American shad, as well as the catadromous American eel. In addition, it is anticipated that white sucker, largemouth bass, smallmouth bass, brook trout, brown trout, rainbow trout, and carp, which have been observed at other fish passages in the area, will use the fish ladder.

Providing fish passage over the dam will allow returning adult Atlantic salmon, as well as other adult anadromous fish (i.e. those observed in the Manhan River below the dam) to continue their migration to spawn in upstream areas of the Manhan River and its tributaries. Additional ecosystem benefits of providing fish passage include an increase in overall productivity from the addition of anadromous fish to the system. Providing fish passage at the dam is also in accordance with the overall cooperative efforts to restore anadromous fish to the Connecticut River Watershed.

The project would involve construction of an approximately 145 foot long Denil fish ladder on the right abutment of the Manhan Dam in order to allow fish passage to spawning areas upstream in the Manhan River. Construction is anticipated to begin some time during 2002, after the anadromous fish migration season and during low flows. Excavation will involve the removal of a very small amount of stream bank gravel/bedrock, in order to construct the Denil fish ladder supports and footings. Appropriate erosion control methods will be utilized. The ladder would have its entrance on the right bank approximately 145 feet downstream from the dam, run along the existing retaining wall, and notch into the right side of the existing dam's spillway to form the exit channel (Figure 2). In detail described from the exit channel, it would descend along the embankment for a distance of approximately 130 linear feet, to a turning pool, and then continue its descent parallel to the stream bank in the opposite direction for 55 feet to a second turning pool. It will then continue for another 5 feet to the entrance channel downstream from the dam.

A cofferdam at both the upstream and downstream ends of the ladder will be constructed for temporary diversion of river flows away from the actual construction site, and be removed upon completion of the project. In addition, a temporary access road will be constructed along the bank. The fishway would be operational during periods of both upstream and downstream fish migration. A backup stop log structure at the upstream end of the ladder would also be incorporated to provide adequate flow during migration times.

Construction of the fish ladder is anticipated to begin some time during 2002, after the anadromous fish migration season and during low flows. Excavation will involve the removal of a very small amount of stream bank gravel/bedrock, in order to construct the Denil fish ladder supports and footings. Appropriate erosion control methods will be utilized. The ladder would have its entrance on the right bank approximately 145 feet downstream from the dam, run along the existing retaining wall, and notch into the right side of the existing dam's spillway to form the exit channel (Figure 2). In detail described from the exit channel, it would descend along the embankment for a distance of approximately 130 linear feet, to a turning pool, and then continue its descent parallel to the stream bank in the opposite direction for 55 feet to a second turning pool. It will then continue for another 5 feet to the entrance channel downstream from the dam.

**Coordination:** The proposed work is being coordinated with the following Federal, State, and local agencies.

**Federal**

U.S. Fish and Wildlife Service  
National Marine Fisheries Service  
U.S. Environmental Protection Agency

**Commonwealth of Massachusetts**

Division of Fisheries and Wildlife  
Department of Environmental Protection  
Department of Environmental Management

**Local**

City of Easthampton, MA

**Local sponsor(s):** The City of Easthampton is the local sponsor for the proposed project.

**Alternatives:** Several alternatives were considered during the Corps plan formulation effort. Initially, a without project 'No Action' condition was evaluated to determine overall benefits and/or impacts to the ecosystem. Without a fish passage, the restoration of self-sustaining runs of Atlantic salmon as well as shad, alewives and blueback herring to the Manhan River upstream from the dam would not occur. The Atlantic salmon stocking in progress upstream from the dam would serve only to provide downstream migrants, which would be unable to return to their upstream spawning habitat. In addition, up-migrating shad, which are currently prevented from continuing upstream by the dam, would continue to gather downstream from the dam without being able to spawn. Therefore, the 'No Action' alternative was not an acceptable solution to the problem. Three methods of developing a fish passage were then investigated to determine an effective solution; (installation of fish lift, dam removal, installation of fish ladder).

Dam removal, which is traditionally the best way to restore fish passage to the Manhan River, was considered. However, the pond created by the dam has been a valuable recreational asset to the City of Easthampton. The dam itself has recently been renovated, with plans for it to remain in place for municipal use. In addition there is concern that the currently submerged bridge abutments approximately 0.5 miles upstream, will become exposed and subject to undermining by the free flowing river if the dam were to be removed. Therefore, dam removal was not recommended.

Installing a fish lift with a trapping channel on the right abutment was investigated. The fish lift requires less construction area and costs less than a fish ladder. However, it also requires a power source, lift operators during the migration seasons,

periodic maintenance, and may not trap and lift enough fish to establish viable breeding populations. Due to these concerns, this alternative was eliminated from further consideration.

The last alternative considered was construction of a fish ladder. Seven different fish ladder alignments were conceptually laid out and reviewed, and it was found that all of the fish ladder costs were approximately equal. In this alternative, a concrete Denil Fish ladder would be constructed along the right embankment of the Manhan Dam. Along with being the locally preferred alternative, the Denil fish ladder carries the lowest total cost as compared to the other alternatives considered. Therefore, it is recommended to build the Denil fish ladder along the right side of the Manhan Dam.

**Environmental Impacts:** The proposed Federal action involves the construction of a fish ladder. This will provide upstream passage for migrating anadromous and catadromous fish. No significant long term or short term adverse impacts to the environment are anticipated. Construction will begin after August 2002 when river conditions permit minimum impact to anadromous fish migration.

**Endangered Species:** A preliminary determination indicates that the proposed activity will not affect any endangered species or critical habitat designated as endangered or threatened pursuant to the Endangered Species Act of 1973 (83 Stat. 844).

**Cultural Resources:** The work will be coordinated with the Massachusetts Historical Preservation Officer (MASHPO) in compliance with Section 106 of the National Historic Preservation Act of 1966, as amended.

**Clean Water Act:** In accordance with Section 404(b)(1) of the Clean Water Act, an Evaluation and Compliance Review will be incorporated into the Environmental Assessment. An application shall be filed for State Water Quality Certification pursuant to Section 401 of the Clean Water Act.

**Additional Requirements:** An application for Water Quality Certification will be submitted to the Massachusetts Department of Environmental Protection, under Section 401 of the Clean Water Act of 1977 (P.L. 95-217), along with a request for the state's concurrence with our determination of Federal consistency.

The decision whether to perform the work will be based on an evaluation of the probable impact(s) of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits that reasonably may be expected to accrue from the proposal will be balanced against its reasonably foreseeable detriments. All factors that may be relevant to the proposal will be considered; among these are conservation, economics, aesthetics, general environmental concerns, historic values, fish and wildlife values, flood damage prevention, land use classification, and the public welfare.

**Clean Water Act:** In accordance with Section 404(b)(1) of the Clean Water Act, an Evaluation and Compliance Review will be incorporated into the Environmental Assessment. An application shall be filed for State Water Quality Certification pursuant to Section 401 of the Clean Water Act.

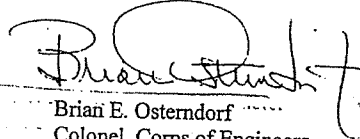
The work will be coordinated with the Massachusetts Historical Preservation Officer (MASHPO) in compliance with Section 106 of the National Historic Preservation Act of 1966, as amended.

An Environmental Assessment of the proposed work is being prepared and will be available for public review. Copies of the Environmental Assessment may be reviewed at the Easthampton Emily Williston Library and Museum or obtained by calling Mr. Robert Russo at the number given above. I have made a preliminary determination that an Environmental Impact Statement for the proposed fish ladder is not required under the provisions of the National Environmental Policy Act of 1969. This determination will be reviewed in light of facts submitted in response to this notice, and if appropriate, a Finding of No Significant Impact (FONSI) will be developed.

Any person who has an interest that may be affected by the proposed fish ladder project may request a public hearing. The request must be submitted in writing to me within 30 days of the date of this notice and must clearly set forth the interest that may be affected and the manner in which the interest may be affected by this activity.

Please bring this notice to the attention of anyone you know to be interested in this project. Comments are invited from all interested parties and should be directed to me at, U.S. Army Corps of Engineers, New England District, 696 Virginia Road, Concord, Massachusetts, 01742-2751, Attn: Engineering/Planning Division, within 30 days of this notice.

Attachments

  
Brian E. Osterndorf  
Colonel, Corps of Engineers  
District Engineer



**Additional Information:** Additional information may be obtained from the  
Engineering/Planning Division of the U.S. Army Corps of Engineers, Mr. Robert Russo,  
Project Manager and Mr. Ken Levitt, Biologist, at the return address shown, telephone  
numbers (978) 318-8553/8114, respectively. Collect calls will be accepted weekdays  
between 9:00 a.m. and 3:00 p.m.

## APPENDIX D

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### **Correspondence**

Mr. Russo - Planning Br

Mr. Levitt/dle/78114

January 23, 2002

Engineering/Planning Division  
Evaluation Branch

Mr. Michael Bartlett  
U.S. Fish and Wildlife Service  
70 Commercial Street  
Suite 300  
Concord, New Hampshire 03301-5087

Dear Mr. Bartlett:

This office has prepared a preliminary draft Environmental Assessment (a copy of which is enclosed) for an aquatic ecosystem restoration project pursuant to Section 206 of the Water Resources Development Act of 1996 (WRDA). The proposed project involves the construction of a fish ladder at the Mahan Dam in East Hampton Massachusetts, in order to restore anadromous fish passage to upstream sections of the Manhan River and its tributaries. Please recall our letter of May 19, 2000, pursuant to the Fish and Wildlife Coordination Act informing you of the proposed project and your June 20, 2000 letter of reply. The purpose of this letter is to request your Final Coordination Act Report on the proposed project. We would appreciate your response within 30 days of receiving this letter.

If you need any additional information, you may call Mr. Robert Russo, Study Manager at (978) 318-8553 or Mr. Ken Levitt, Biologist at (978) 318-8114.

Sincerely,

David L. Dulong, P.E.  
Chief, Engineering/Planning Division

Enclosure

CF:  
Mr. Russo - Planning Br ✓  
Mr. Levitt - Evaluation Br  
Mr. Hubbard - Evaluation Br  
Eng/Plan Div Files



## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
New England Field Office  
70 Commercial Street, Suite 300  
Concord, New Hampshire 03301-5087



David L. Dulong  
Chief, Engineering/Planning Division  
U.S. Army Corps of Engineers  
696 Virginia Road  
Concord, MA 01742-2751

February 26, 2002

Dear Mr. Dulong:

This is in response to your letter dated January 23, 2002 requesting our comments on the Manhan Dam Aquatic Ecosystem Restoration Project in Easthampton, Massachusetts. The proposed project involves the construction of a fish ladder at the Manhan Dam in order to restore anadromous fish passage to upstream sections of the Manhan River and its tributaries. The following comments are provided in accordance with the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.).

As we stated in our letter of June 20, 2000, we concur that the construction of a fish ladder is the most appropriate means of establishing upstream passage for anadromous fish. Since that time, members of the Service's engineering staff have been consulted in the design of the fish ladder and have concluded that the proposed Denil fish ladder is an appropriate design to accomplish this purpose. Therefore, we concur with the conclusions found in the Environmental Assessment and Finding of No Significant Impact.

If you have any questions concerning these comments, please contact Philip Morrison at 603-223-2541.

Sincerely,

William J. Neidermyer  
Assistant Supervisor  
Federal Activities  
New England Field Office

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MAR - 1 2002

REGULATORY DIVISION



Commonwealth of Massachusetts



# Division of Fisheries & Wildlife

Wayne F. MacCallum, *Director*

13 June 2000

John R. Kennelly  
Army Corps of Engineers  
696 Virginia Road  
Concord, MA 01742-2751

Re: Aquatic Ecosystem Restoration Project for the Manhan River Dam  
Easthampton, MA  
NHESP File: 00-7458

Dear Mr. Kennelly,

Thank you for contacting the Natural Heritage and Endangered Species Program for information regarding state-protected rare species in the vicinity of the above referenced site. I have reviewed the site and would like to offer the following comments.

Our database indicates that the state-protected rare species listed on the following page occur in the vicinity of the project site.

These species are protected under both the Massachusetts Endangered Species Act (M.G.L. c.131A) and its implementing regulations (321 CMR 10.00), and the state's Wetlands Protection Act (M.G.L. c.131) and its implementing regulations (310 CMR 10.00). If you are required to file a Notice of Intent with the local conservation commission, you must also submit a copy of the NOI to our program for review.

We are happy to review detailed project alternatives when they become available.

This evaluation is based on the most recent information available in the Natural Heritage database, which is constantly being expanded and updated through ongoing research and inventory. Should your site plans change, or new rare species information become available, this evaluation may be reconsidered.

Please do not hesitate to call me at (508) 792-7270 x154 if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Erica Payne".

Erica Payne  
Environmental Review Assistant



## Natural Heritage & Endangered Species Program

Route 135, Westborough, MA 01581 Tel: (508) 792-7270 x 200 Fax: (508) 792-7275  
An Agency of the Department of Fisheries, Wildlife & Environmental Law Enforcement  
<http://www.state.ma.us/dfwele/dfw>



Commonwealth of Massachusetts

# Division of Fisheries & Wildlife

Wayne F. MacCallum, Director

February 25, 2003

Easthampton Conservation Commission  
Town Hall, 43 Main Street  
Easthampton, MA 01027

RE:   Applicant:                   City of Easthampton  
      Project Location:           29 Rear Northampton Street, Manhan River Dam  
      Project Description:       Installation of a fish passage on an existing dam  
      NHESP File No.           02-11016                   DEP File No.   151-220

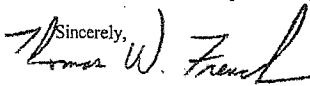
Dear Commissioners:

Additional information and plan (received Jan. 3, 2003) have been submitted to the Natural Heritage & Endangered Species Program (NHESP) in response to our initial review letter under the Massachusetts Wetlands Protection Act Regulations (310 CMR 10.58(4)(b) & 10.59) for the subject project. The applicant proposes to work within Riverfront Area, Bank, Land Under Water, and Bordering Land Subject to Flooding associated with the Manhan River for this project.

Based on review of the information that was provided and the information that is currently contained in our database, the NHESP has determined that this project occurs within actual habitat of the Triangle Floater mussel (*Alasmidonta undulata*), Creeper mussel (*Strophitus undulatus*), Eastern Pondmussel (*Ligumina nasuta*), Wood Turtle (*Clemmys insculpta*), Zebra Clubtail dragonfly (*Stylurus scudderii*), and Brook Snaketail dragonfly (*Ophiogomphus aspersus*), all state-protected rare wildlife species. The Zebra Clubtail is state-protected as an "Endangered" species, the Triangle Floater, Creeper, Eastern Pondmussel, Wood Turtle, and Brook Snaketail dragonfly are listed as "Special Concern" pursuant to the Massachusetts Endangered Species Act (M.G.L. c.131A).

As previously requested, additional information is required in order to determine if this project, as currently proposed, will adversely affect actual habitat of rare wildlife species. Site plans shall be revised to clearly depict the proposed cofferdam design, locations and designs of dewatering structures, and locations and types of stabilization measures to be implemented in each area to be disturbed. Water quality during construction in the Manhan River should be of the highest priority. Designs of all mitigating measures to protect the water quality in the river should be depicted on the plans and explained in detail. It is important to design the cofferdams and dewatering structures specifically for this project and site, understanding the water depths and rates of flow anticipated during construction. Please clarify which work areas are to be re-vegetated after construction and the proposed seeding or planting details. The NHESP will complete its review of this proposal after receipt of the information requested.

Please note that this determination addresses only the matter of rare wildlife habitat and does not pertain to other wildlife habitat issues that may be pertinent to the proposed project. If you have any questions about this matter please call Nancy Putnam at ext. 306. The NHESP shall be copied on any revisions and Orders of Conditions for this project.

Sincerely,  


Thomas W. French, Ph.D.  
Assistant Director

cc:           Mayor's Office, City of Easthampton  
              Robert Russo, US Army Corps of Engineers  
              Dave Foulis, DEP Western Regional Office

[www.masswildlife.org](http://www.masswildlife.org)

Division of Fisheries and Wildlife  
Field Headquarters, One Rabbit Hill Road, Westborough, MA 01581 (508) 792-7270 Fax (508) 792-7275  
An Agency of the Department of Fisheries, Wildlife & Environmental Law Enforcement



Commonwealth of Massachusetts

# Division of Fisheries & Wildlife

Wayne F. MacCallum, Director

August 2, 2004

Easthampton Conservation Commission  
Town Hall, 43 Main Street  
Easthampton, MA 01027

RE:   Applicant:                   City of Easthampton  
      Project Location:       29 Rear Northampton Street, Manhan River Dam  
      Project Description:   Installation of a fish passage on an existing dam  
      NHESP File No.       02-11016                   DEF File No. 151-220

Dear Commissioners:

Additional information and full-scale plans have been submitted to the Natural Heritage & Endangered Species Program (NHESP) in response to our previous review letter under the Massachusetts Wetlands Protection Act Regulations (310 CMR 10.58(4)(b) & 10.59) for the subject project. The applicant proposes to work within Riverfront Area, Bank, Land Under Water, and Bordering Land Subject to Flooding associated with the Manhan River for this project.

Based on review of the information that was provided and the information that is currently contained in our database, the NHESP has determined that this project occurs within actual habitat of the Triangle Floater mussel (*Alasmidonta undulata*), Creeper mussel (*Strophitus undulatus*), Eastern Pondmussel (*Ligumia nasuta*), Wood Turtle (*Clemmys insculpta*), Zebra Clubtail dragonfly (*Stylurus scudderi*), and Brook Snaketail dragonfly (*Ophiogomphus aspersus*), all state-protected rare wildlife species. The Zebra Clubtail is state-protected as an "Endangered" species, the Triangle Floater, Creeper, Eastern Pondmussel, Wood Turtle, and Brook Snaketail dragonfly are listed as "Special Concern" pursuant to the Massachusetts Endangered Species Act (M.G.L. c.131A).

The NHESP has determined that the proposed work on this site will not adversely affect actual rare wildlife habitats, provided the following conditions are included in the Order of Conditions and complied with.

1. Work on this site shall be done only during low flow conditions and in the absence of significant rainfall. Water quality in the Manhan River should be of the highest priority during and after construction.
2. Work shall be supervised by a qualified wildlife biologist with experience in turtles. This individual shall be responsible for searching the work areas (inside all erosion and sedimentation barriers and cofferdams) for any state-listed turtles directly before the start of any heavy equipment moving into all resource areas.
3. On the day of and prior to start of work a mussel survey shall be conducted in the area of proposed work by a qualified wildlife biologist with experience in rare mussel identification. The survey should include surface and sub-surface exploration and done in accordance with the attached Mussel Transplantation Protocol.

[www.masswildlife.org](http://www.masswildlife.org)

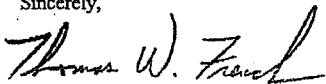
Division of Fisheries and Wildlife

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An Agency of the Department of Fisheries, Wildlife & Environmental Law Enforcement

4. The wildlife consultant is required to obtain a scientific collection permit from the Division of Fisheries and Wildlife to handle rare species. Any and all rare species encountered at the site should be measured, identified and reported to NHESP on Rare Animal Observation Forms as soon as possible. Any listed turtles and mussels found on the site shall be carefully moved outside of the work areas into similar habitat.

Please note that this determination addresses only the matter of rare wildlife habitat and does not pertain to other wildlife habitat issues that may be pertinent to the proposed project. If you have any questions about this matter please call Nancy Putnam at ext. 306. The NHESP shall be copied on any revisions and Orders of Conditions for this project.

Sincerely,



Thomas W. French, Ph.D.  
Assistant Director

cc: Mayor's Office, City of Easthampton  
Robert Russo, US Army Corps of Engineers  
Dave Foulis, DEP Western Regional Office



Commonwealth of Massachusetts

# Division of Fisheries & Wildlife

Wayne F. MacCallum, Director

1 May 2002 (last revised July 2004)

## NATURAL HERITAGE & ENDANGERED SPECIES PROGRAM

### FRESHWATER MUSSEL TRANSPLANTATION PROTOCOL

#### FOR STATE-LISTED SPECIES

The Massachusetts Natural Heritage & Endangered Species Program (NHESP) of the MA Division of Fisheries & Wildlife developed the Freshwater Mussel Transplantation Protocol for use at bridge replacement and upgrade projects, or other projects that could result in the "take" of state-listed freshwater mussels pursuant to the MA Endangered Species Act (G.L. c.131A) and its implementing regulations (321 CMR 10.00). Take in reference to animals means to "harass, harm, hunt, shoot, hound, kill, trap, capture, collect, process, disrupt the nesting, breeding, feeding, or migratory activity or attempt to engage in any such conduct, or to assist such conduct." This protocol addresses direct impacts to state-listed freshwater mussels from construction, and does not specifically address indirect sedimentation impacts to habitat or individual filtering mussels downstream of construction sites.

This transplantation protocol should be implemented at proposed dock sites once the docks are sited to minimize negative impacts to state-listed freshwater mussels. Dock site locations are determined through data obtained from freshwater mussel surveys that are approved by NHESP, and conducted by qualified individuals during the months of June, July, August, and September.

Seven (7) of the twelve freshwater mussel species (bold type) that occur in Massachusetts are state-listed as Endangered, Threatened, or Special Concern pursuant to the Massachusetts Endangered Species Act (M.G.L. c.131A). Two additional species are uncommon and three are common. They are as follows:

<u>Species</u>	<u>Status</u>
<b>Dwarf Wedgemussel (<i>Alasmidonta heterodon</i>)</b>	Endangered (state and federal)
<b>Yellow Lampmussel (<i>Lampsilis cariosa</i>)</b>	Endangered
<b>Swollen Wedgemussel (<i>Alasmidonta varicosa</i>)</b>	Threatened
<b>Triangle Floater (<i>Alasmidonta undulata</i>)</b>	Special Concern
<b>Creeper (<i>Strophitus undulatus</i>)</b>	Special Concern
<b>Eastern Pondmussel (<i>Ligumia nasuta</i>)</b>	Special Concern
<b>Tidewater Mucket (<i>Leptodea ochracea</i>)</b>	Special Concern
<b>Eastern Pearlshell (<i>Margaritifera margaritifera</i>)</b>	Uncommon
<b>Eastern Lampmussel (<i>Lampsilis radiata</i>)</b>	Uncommon in rivers
<b>Eastern Elliptio (<i>Eastern Elliptio</i>)</b>	Very Common
<b>Eastern Floater (<i>Pyganodon cataracta</i>)</b>	Common
<b>Alewife Floater (<i>Anodonta imbecilis</i>)</b>	Common

[www.masswildlife.org](http://www.masswildlife.org)

Division of Fisheries and Wildlife

Field Headquarters, One Rabbit Hill Road, Westborough, MA 01581 (508) 792-7270 Fax (508) 792-7275

An Agency of the Department of Fisheries, Wildlife & Environmental Law Enforcement

NHESP Freshwater Mussel Transplantation Plan  
1 May 2002 (last revised July 2004)

**Survey Protocol**

- A. Performed by a qualified individual holding a Scientific Collecting Permit from the MA Division of Fisheries & Wildlife.
- B. Surveys should systematically cover the entire river/stream or lake bottom associated with the proposed project area and 50 feet beyond the limit of work. The proposed project area could include the river, stream or lake bottom under the bridge or proposed dock, at abutments and cofferdams, inside cofferdams, at all work areas within the water, and all dewatered areas. Twenty per cent (20%) of the work area should have subsurface exploration using 1 meter quadrats across all substrate types.
- C. SCUBA is required in water over 3 feet deep, and snorkeling is preferable in water less than 3 feet deep. Mucket buckets may be used, but are not desirable. Hand surveys may be necessary when visibility is poor.
- D. Conduct surveys one week or less prior to actual construction.
- E. Mussels should be counted and identified to species, recording the length of all rare mussel species. Rare species records will be submitted to the Natural Heritage & Endangered Species Program.
- F. Mussels will be collected and transferred to nearby *upstream* suitable habitat on the same day they are collected. Mussels may be temporarily held in coolers filled with river water.
- G. Mussels will be appropriately implanted into the substrate, posterior end up.

**NHESP Reporting Requirements:**

- A. Names and phone numbers of those conducting surveys.
- B. Map of surveyed area and transplantation area.
- C. List of species and their abundance.
- D. Shell lengths of rare mussels.
- E. Rare Animal Observation Forms for rare species.
- F. Summary of results, including any problems encountered.



## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
New England Field Office  
70 Commercial Street, Suite 300  
Concord, New Hampshire 03301-5087  
<http://www.fws.gov/northeast/newenglandfieldoffice>



January 2, 2009

To Whom It May Concern:

This project was reviewed for the presence of federally-listed or proposed, threatened or endangered species or critical habitat per instructions provided on the U.S. Fish and Wildlife Service's New England Field Office website:

(<http://www.fws.gov/northeast/newenglandfieldoffice/EndangeredSpec-Consultation.htm>)

Based on the information currently available, no federally-listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service (Service) are known to occur in the project area(s). Preparation of a Biological Assessment or further consultation with us under Section 7 of the Endangered Species Act is not required.

This concludes the review of listed species and critical habitat in the project location(s) and environs referenced above. No further Endangered Species Act coordination of this type is necessary for a period of one year from the date of this letter, unless additional information on listed or proposed species becomes available.

Thank you for your cooperation. Please contact Mr. Anthony Tur at 603-223-2541 if we can be of further assistance.

Sincerely yours,

Thomas R. Chapman  
Supervisor  
New England Field Office

MEMORANDUM FOR THE RECORD

FROM: Melissa Grader, New England Field Office  
U.S. Fish and Wildlife Service

DATE: October 1, 2009

SUBJECT: Inter-agency Section 7 Consultation for the Manhan River Dam  
Fish Passage Project

I phoned Julie Crocker of the National Marine Fisheries Service, Office of Protected Resources to inquire about the need to initiate formal Section 7 consultation for the Manhan River Fish Passage Project's potential impacts to the federally endangered shortnose sturgeon. Ms. Crocker informed me that there was no evidence of sturgeon in the project area and therefore, no need for further consultation with the Office of Protected Resources.